

EXHIBIT 1

This content is outdated and no longer accurate.

User-Agent Reduction origin trial

Warning: The User-Agent Reduction origin trial ended March 7, 2023. The User-Agent UA string is now fully reduced.

To replace functionality that relied on the User Agent string, you can implement the [User Agent client hints API](https://developer.mozilla.org/docs/Web/API/User-Agent_Client_Hints_API#browser_compatibility) (https://developer.mozilla.org/docs/Web/API/User-Agent_Client_Hints_API#browser_compatibility).

The [User-Agent Client Hints page](https://web.dev/articles/migrate-to-ua-ch) (<https://web.dev/articles/migrate-to-ua-ch>) provides some background.

The remainder of this blog post should be considered deprecated.

User-Agent Reduction is an effort to reduce passive fingerprinting surfaces by reducing the information in the [User-Agent](https://developer.mozilla.org/docs/Web/HTTP/Headers/User-Agent) (UA) string to only the browser's brand and significant version, its desktop or mobile distinction, and the platform it's running on. Currently, the UA string is shared on every HTTP request and exposed in JavaScript to all resources loaded by the browser. It contains significant information on the browser, the platform it's running on, and its capabilities. [User-Agent Client Hints](https://wicg.github.io/ua-client-hints/) (UA-CH) can provide the same information as the full UA string, while allowing sites to only request the UA information that they need.

Beginning with the [Chrome 95](https://chromiumdash.appspot.com/schedule) Beta, we'll open up the [origin trial](https://developer.chrome.com/origintrials/#/view_trial/-7123568710593282047) for [User-Agent Reduction](https://blog.chromium.org/2021/09/user-agent-reduction-origin-trial-and-dates.html) to allow sites to opt into receiving the reduced UA string now. This will enable sites to discover and fix problems before the reduced UA becomes the default behavior in Chrome (the reduction is planned to start in the [second quarter of 2022](https://blog.chromium.org/2021/09/user-agent-reduction-origin-trial-and-dates.html)).

(<https://blog.chromium.org/2021/09/user-agent-reduction-origin-trial-and-dates.html>). If you would like to test the origin trial on 95 Beta users before it launches to the stable population, be sure to opt in and test before the release date for Chrome 95 ([currently scheduled](https://chromiumdash.appspot.com/schedule) for October 19th, 2021).

Below is an overview of the origin trial and what to expect, and as always, we welcome feedback or any issues throughout this trial in the UA Reduction [GitHub repository](https://github.com/miketaylr/user-agent-reduction/issues) (<https://github.com/miketaylr/user-agent-reduction/issues>).

What is the User-Agent?

The User-Agent (<https://developer.mozilla.org/docs/Web/HTTP/Headers/User-Agent>) (UA) string is shared on every HTTP request and exposed in JavaScript to all resources loaded by the browser. Currently, it contains significant information on the browser and the platform it's running on.

Why is the User-Agent being reduced?

User-Agent Reduction is an effort to reduce passive fingerprinting surfaces in the Chrome browser that was first announced in January 2020. By reducing the information in the UA string to just the browser's brand and significant version, its desktop or mobile distinction, and the platform it's running on, it becomes more difficult to identify individual users.

What does this mean for web developers?

Sites should prepare to receive reduced UA strings and consider participating in the origin trial (detailed below). The reduced user agent values will appear in:

- The `User-Agent` HTTP request header
- The `navigator.userAgent` Javascript getter
- The `navigator.platform` Javascript getter
- The `navigator.appVersion` Javascript getter

To receive more client information than what's shared by the reduced User-Agent, sites will need to migrate to the new User-Agent Client Hints (<https://web.dev/articles/migrate-to-ua-ch>) API. For more details on migration strategies, see Migrate to User-Agent Client Hints (<https://web.dev/articles/migrate-to-ua-ch>).

The User-Agent reduction plans do not currently include iOS and WebView, therefore those platforms will continue to get the full user agent string. The primary reason is that these platforms have not yet implemented User-Agent Client Hints (<https://web.dev/articles/migrate-to-ua-ch>).

How does this origin trial work?

This origin trial is a bit different from a standard origin trial. Standard origin trials can only control behavior in the response (for example, control access to an API in the response's Javascript). In this trial, our goal is to not only modify the UA string provided in the Javascript APIs, but also to modify the User-Agent header sent on the HTTP request.

To be able to do this, we are defining a temporary client hint, named `Sec-CH-UA-Reduced`, whose presence in a request will indicate that the User-Agent header value contains the reduced UA string. The `Sec-CH-UA-Reduced` client hint will only be sent (along with the reduced UA string) if the origin trial token is valid and the `Sec-CH-UA-Reduced` client hint will not work once the origin trial expires. Keep in mind that the first navigation request will still receive the unreduced User-Agent string unless you set the `Critical-CH header` (`#validate`).

Subresource requests to the same origin will automatically send the same User-Agent string as the top-level request sent. Subresource requests to third-party origins will also send the same User-Agent string as the top-level request, including the reduced UA string if the origin trial token is valid, provided that the [permissions policy](https://developer.chrome.com/articles/permissions-policy/) (<https://developer.chrome.com/articles/permissions-policy/>) allows it.

How do I participate in the User-Agent Reduction origin trial?

1. To register for the origin trial and get a token for your domains, visit the [Trial for User Agent Reduction page](https://developer.chrome.com/origintrials/#/view_trial/-7123568710593282047) (https://developer.chrome.com/origintrials/#/view_trial/-7123568710593282047).

★ **Note:** To register your domains for the trial as a third-party embed, you will need a separate token (`#enroll-third-party`).

2. Update your HTTP response headers:

- a. Add `Origin-Trial: <ORIGIN TRIAL TOKEN>` to your HTTP response header, where `<ORIGIN TRIAL TOKEN>` contains the token you got when registering for the origin trial.
- b. Add `Accept-CH: Sec-CH-UA-Reduced` to your HTTP response header.
- c. Setting `Accept-CH` will only cause the reduced User-Agent string to be sent on subsequent requests to the origin; to resend the first navigation request with the reduced User-Agent string, add `Critical-CH: Sec-CH-UA-Reduced` to your HTTP response header, in addition to the `Accept-CH` and `Origin-Trial` headers.
- d. Note: If the response headers contain a valid `Origin-Trial` token and `Accept-CH: Sec-CH-UA-Reduced`, then all subresource requests (for example, for images or stylesheets)

and subnavigations (for example, iframes) will send the reduced UA string, even if the origins of those requests are not enrolled in the origin trial.

3. Load your website in Chrome M95 (or later) and start receiving the reduced UA string.
4. Submit any issues or feedback to the UA Reduction [GitHub repository](https://github.com/miketaylr/user-agent-reduction/issues) (<https://github.com/miketaylr/user-agent-reduction/issues>).
5. See <https://uar-ot.glitch.me/> (<https://uar-ot.glitch.me/>) for a simple demonstration of the origin trial (along with the source code).

How to participate in the origin trial as a third-party embed?

Starting in Chrome 96, third-party embeds (for example, an iframe inside another site) can participate in the origin trial without requiring the top-level site to be enrolled.

To enroll as a third-party embed:

1. Visit the [Trial for User Agent Reduction](https://developer.chrome.com/origintrials/#/view_trial/-7123568710593282047) (https://developer.chrome.com/origintrials/#/view_trial/-7123568710593282047) and click **Register**.
2. When creating the token, make sure to select the **Third-party matching** checkbox.
3. To receive the reduced User-Agent header from the third-party embed, update the HTTP response headers (#enroll-top-level).
4. To receive the reduced User-Agent string in Javascript APIs, the trial token must be injected via Javascript (<https://github.com/GoogleChrome/OriginTrials/blob/gh-pages/developer-guide.md#16-can-i-provide-tokens-by-running-script>)

Some important points about running the origin trial on third-party embeds: + **Critical-CH** cannot be specified for third-party embeds, so the first navigation won't send the reduced UA string, although the subresource requests of the third-party embed will send the reduced UA string. + If the origin trial is validated for the origin of a third-party embed, subsequent requests to the same origin in a top-level navigation will send the reduced UA string. For this reason, it's recommended to ramp up participation in the origin trial for both top-level and embed requests together. + If the user agent has disabled third-party cookies, then the origin trial won't work for User-Agent header in third-party embed requests, although the Javascript APIs will still get the reduced UA string.

How do I validate that the origin trial is working?

To validate that the origin trial is working, examine the request headers and ensure the following:

1. The User-Agent header contains the reduced version. Refer to this [list of samples of reduced UA strings](https://www.chromium.org/updates/ua-reduction#TOC-Sample-UA-Strings:-Phase-4) (https://www.chromium.org/updates/ua-reduction#TOC-Sample-UA-Strings:-Phase-4). An easy way to tell is that the Chrome minor version string contains 0.0.0.
2. The Sec-CH-UA-Reduced header is set to ?1.

The initial response's headers containing the origin trial token should look like:



Initial response's headers containing the origin-trial token.

Subsequent request headers containing the reduced UA string should look like:



Subsequent request headers containing the reduced UA string.

How do I stop participating in the User-Agent Reduction origin trial?

At any given point in time during the trial, you can stop participating and receive the full User-Agent string. To stop participating:

1. Send an Accept-CH header in your HTTP response that does **not** include Sec-CH-UA-Reduced. Note: Accept-CH with an empty value is a valid way to accomplish this if your site does not request any other Client Hints.
2. Remove the Origin-Trial header for the User-Agent Reduction trial from your HTTP response.
3. If set, remove Sec-CH-UA-Reduced from the Critical-CH header in your HTTP response.

How long will the origin trial last?

The UA Reduction origin trial will run for at least six months, which corresponds to about six Chrome milestones. The origin trial will appear in M95 and end by M101, at which point, Chrome will evaluate the feedback from the origin trial before proceeding with sending the reduced User-Agent string in a phased manner according to the [rollout plan](#)

(<https://www.chromium.org/updates/ua-reduction#TOC-Proposed-Rollout-Plan>). If a site needs longer they can opt into a subsequent deprecation origin trial, which would allow them to access the full UA string for at least another six months. We will publish more details on the deprecation trial when it's ready.

How do I share feedback for the User-Agent Reduction origin trial?

Submit any issues or feedback to the UA Reduction [GitHub repository](#).

(<https://github.com/miketaylr/user-agent-reduction/issues>).

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